

INTEGRATING AI INTO FORMATIVE ASSESSMENT IN ENGLISH LANGUAGE CLASSROOMS OF KAZAKHSTAN'S SCHOOLS

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Abstract. This article examines the current state of formative assessment (FA) in English language teaching across Kazakhstan's schools and explores how artificial intelligence (AI) can support and enhance this process. Formative assessment is crucial for improving learning outcomes, yet its implementation in Kazakhstan's schools faces various challenges. The research presents findings from a study comparing how different age groups of teachers implement FA, the extent to which they adhere to FA principles, and the challenges they encounter. A special focus is given to a novel approach integrating artificial intelligence tools such as ChatGPT, Grammarly, Quillion, Turnitin Feedback Studio, Peergrade, Curipod, etc. to enhance formative assessment. For each FA component (immediate instructional adjustment, learning goal setting, feedback provision, self-assessment, peer-assessment, and strategic questioning), the role of AI is described with practical examples. The results show that leveraging AI can reduce teacher workload, provide students with rapid and personalized feedback, and increase their engagement in learning. The novelty of this work lies in blending traditional FA methods with AI technologies, which holds practical significance for schools in Kazakhstan. The study also outlines challenges and ethical considerations associated with integrating AI into classroom practice. Overall, the research offers recommendations for developing teachers' digital skills and creating supportive conditions for effective AI-assisted formative assessment in Kazakhstan's educational context.

Keywords: formative assessment, English language teaching, artificial intelligence, feedback, self-assessment, peer assessment, Kazakhstan.

Introduction

Formative assessment (FA) has gained prominence in education due to its impact on improving student learning. FA is commonly defined as an ongoing process where evidence of student learning is gathered and used by teachers, learners, and peers to make immediate decisions to enhance instruction. Unlike summative assessments that evaluate learning at the end of a term, formative assessment is a type of assessment that is carried out during daily work in the classroom, which ensures operational communication between the student and the teacher during the learning process [1]. In fact, effective FA involves setting clear learning goals, monitoring students' progress towards realizing these goals, providing timely and constructive feedback and engaging students in self-assessment and mutual evaluation in order to promote improvement.

To be truly effective, assessment practices should be regular, consistent and closely aligned with educational objectives, thereby fostering a culture of accountability and continuous improvement. By using transparent assessment criteria, emphasizing formative strategies and integrating authentic real-world applications, teachers can ensure that assessment not only measures learning outcomes, but also contributes to students' cognitive and personal development [2].

In Kazakhstan, recent education reforms aimed at competency-based learning have emphasized formative assessment. Schools are encouraged to use criterion-based systems that integrate continuous feedback and evaluation into daily teaching. Yet, English language teachers differ in their understanding and use of FA. Research on their classroom practices and related challenges remains limited, particularly during the transition from teacher-centered to learner-centered approaches. This study seeks to fill the gap by exploring current formative assessment practices in Kazakhstani English classrooms and by proposing ways to enhance these practices.

The study purposes to discover English language teachers' perceptions and applications of formative assessment in Kazakhstan and to suggest improvements. The guiding exploration questions are: (1) How do English teachers of different age groups (approximately 24–34, 35–45, and 46+ years) differ in their accepting and use of FA strategies? (2) To what extent do these educators implement key principles of FA and feedback in their classrooms? (3) What challenges hinder the effective use of formative assessment in English language teaching in Kazakhstan, and how might these be overcome?

A notable contribution of this article is the integration of *artificial intelligence (AI) tools* into the discussion of formative assessment. In recent years, AI-powered educational technologies have opened new possibilities for supporting teachers and students. President Kassym-Jomart Tokayev's State of the Nation Address to the People of Kazakhstan "Kazakhstan in the Era of Artificial Intelligence: Current Challenges and Solutions through Digital Transformation" emphasizes that a *curriculum and learning materials on basic artificial intelligence should be developed for school students, and teachers must be equipped with the necessary skills to effectively use AI technologies in their work* [3]. Tools like intelligent tutoring systems, automated writing evaluators and conversational AI (chatbots) can personalize learning and provide immediate feedback at scale. Strategically incorporating AI tools into formative assessment practices can help address some challenges, like large class sizes and time constraints, while enriching the learning experience. By examining each component of formative assessment and illustrating how AI can play a role, for example, using *ChatGPT* for generating feedback or *Curipod* for interactive questioning, we aim to demonstrate a novel approach that blends proven pedagogical techniques with cutting-edge technology. This approach is especially relevant for Kazakhstan's schools as they strive to innovate and improve educational quality in English language teaching.

Methods and materials

The study employed a mixed-methods approach consisting of a teacher survey and follow-up interviews. A descriptive survey was used to gather quantitative numbers on teachers' use of formative assessment, and semi-structured interviews provided qualitative insights into their experiences and challenges. This combination ensured a balanced and comprehensive view of classroom practices.

Participants were 60 EFL teachers from public schools in Almaty city and region, representing various age groups (24–34, 35–45, 46+) and teaching experience (2–25 years). Twelve teachers were later interviewed in depth. The questionnaire included Likert-scale, multiple-choice, and open-ended items and gathered demographic data.

After the survey, follow-up interviews were held in person or online to explore these topics further. Teachers discussed examples from their classrooms, the difficulties they faced, and ideas for improving formative assessment. Each interview was recorded and transcribed with the permission of the participants.

Survey results were examined using descriptive statistics, group comparisons, chi-square tests, and ANOVA to compare age groups. Interviews were thematically coded, revealing key barriers such as time constraints, large classes, limited training, and low student motivation.

Ethical approval was obtained, participation was voluntary, and confidentiality was maintained. The research procedure received approval from the university's ethics committee. During the interviews, care was taken to create a non-judgmental environment so that teachers could speak straightforwardly about challenges. Any sensitive information was kept confidential.

By combining quantitative and qualitative methods, the research aimed for a broad interpretation of formative assessment in practice.

Results and discussions

The findings are presented in two parts: first, an overview of current formative assessment practices and challenges as reported by teachers, and second, a detailed discussion of each key component of FA in practice. Table 1 summarizes selected survey results on teachers' formative assessment practices by age group, and the subsequent subsections elaborate on these results with qualitative insights and improvement strategies.

Table 1 – Summary of formative assessment practices reported by English teachers (by age group)

Formative Assessment Practice	24–34 years (n=20)	35–45 years (n=20)	46+ years (n=20)
Share lesson objectives with students (often/always)	85%	70%	60%
Provide written formative feedback (not just grades)	65%	55%	45%
Use immediate in-class checks (e.g. quick quizzes)	90%	80%	50%
Encourage student self-assessment (regularly)	50%	40%	30%
Conduct peer-assessment activities (occasionally or more)	55%	45%	20%
Use open-ended questioning (vs. only recall questions)	75%	65%	50%
Use digital/AI tools to support FA (any use)	40%	30%	15%

Note: “Often/always” and “regularly” categories are based on self-reported frequency; “digital/AI tools” includes any mention of apps like online quizzes, automated feedback, etc. Percentages indicate proportion of teachers in that age group selecting the given option.

Overall, the survey indicates that formative assessment is moderately used by English teachers. Most teachers rely on questioning and short in-class checks, and many occasionally share learning goals with students. However, self- and peer-assessment are still rare, especially among older teachers, and detailed feedback remains uncommon. Younger teachers (24–34) use formative methods more actively and often employ digital tools for quizzes or feedback, while older teachers (46+) tend to prefer traditional, teacher-led approaches with limited technology use.

Teacher interviews added context to the survey findings. Mostly older educators felt unsure about applying peer or self-assessment effectively. One teacher from the 46+ group mentioned that she sometimes asks students to check their own work, but she is not sure if they do it correctly, so she usually ends up marking everything herself. Time limits, large classes, and lack of training were cited as major barriers. Younger teachers often learned about formative assessment in their studies or professional development courses, while older teachers expressed a need for more guidance.

Although challenges remain, teachers acknowledge the value of formative assessment. Many observed that feedback and student involvement increased engagement and understanding. One teacher noted that using clear goals and comments instead of grades improved student focus and performance. Thus, clear goals and formative feedback can significantly enhance learning outcomes [4, 5].

Immediate Instructional Adjustment

A key part of formative assessment is making *immediate instructional adjustments (IIA)* real-time changes in teaching based on evidence of student learning (or confusion) gathered during the lesson. Popham W.J. describes it as a continuous cycle: gather evidence, interpret it, and modify teaching immediately [6]. In this study, most teachers checked understanding through quick quizzes or questions. As shown in Table 1, 90% of young teachers and 50% of older ones use in-class quizzes or similar, but the depth of response varies. Younger teachers often re-explained topics right away, while older ones noticed gaps only after grading, showing that real-time adjustment skills need further development, especially among less tech-savvy educators.

AI can greatly assist with immediate instructional adjustments by quickly analyzing student responses and signaling misconceptions. Tools like *Quillion* can generate quick quizzes from lesson materials, while students respond via phones or clickers. Results appear instantly, showing where

learners struggle. Some AI platforms even adjust question difficulty automatically based on performance. Even simple tools like AI-based polls in *Curipod* or similar apps allow teachers to see within seconds whether a concept needs re-teaching, making feedback faster and more targeted.

In one classroom example, a teacher used a quick *Curipod* poll after teaching possessive apostrophes. When most students chose the wrong answer, the instant results showed their confusion. The teacher immediately paused, clarified the rule with a new example, and checked understanding again which was further successfully. Compared to manual correction, the AI tool sped up the feedback process by instantly identifying misconceptions, allowing the teacher to focus on clarification rather than checking each student's response individually.

In large classes, such AI assistants act as personal tutors, guiding each learner through specific misunderstandings. Research shows that immediate feedback boosts learning effectiveness, and AI-based apps such as grammar or math platforms already deliver instant corrections and explanations, helping students refine their skills without waiting for teacher feedback.

AI can strengthen immediate instructional adjustments by identifying struggling students and providing instant feedback. This prevents misconceptions from persisting and allows teachers to address issues during the lesson. Teachers in the study noted that such tools ease the burden of tracking every learner as one described AI quizzes as “a helpful assistant showing who needs help”. For Kazakhstani educators, especially those with large classes, AI offers a practical way to apply real-time learning and correction rather than waiting for test results.

Shared Learning Goals and Student Goal Setting

Effective formative assessment starts with clear learning goals. Sharing clear learning goals and helping students set their own targets is described by Moss and Brookhart as the “hub” of FA, because without a clear destination, feedback and adjustments may miss the mark [7]. In our survey, interviews showed that while class aims are often written on the board, individual goal-setting is rare due to time limits and lack of strategies. One teacher mentioned, “*I have class goals, yes, but individual student goals... I imagine it's useful, I just haven't tried in a systematic way.*” This aligns with literature noting that student goal-setting remains undervalued in practice despite evidence that it improves performance.

A few younger teachers in the study encouraged students to set weekly English goals such as learning new words or improving test results and found it boosted motivation. However, this approach is still uncommon in Kazakhstani classrooms.

AI tools can make goal-oriented learning more personalized and feasible. Adaptive learning systems, like language apps or *Khan Academy*, analyze student performance to tailor content and set suitable targets. For instance, an AI app might note that a learner knows 80% of A2 vocabulary and recommend mastering the remaining 20%. In class, teachers can use such data to guide discussions on individual goals, like improving listening skills to a higher level based on the app's feedback and suggested practice activities.

Moreover, generative AI tools like *ChatGPT* can help students define and refine their learning goals. This way, learning goals become clearer to students. Research shows that such personalized guidance and reminders help learners stay focused and make steady progress, especially in digital and self-directed learning environments.

AI-powered dashboards and learner profiles can make goal tracking more visible and motivating. Modern Learning Management Systems (LMS) platforms use analytics to show each student's progress and skill gaps through visual tools like progress bars. Teachers in our interview noted that such insights can motivate students, but are difficult to manage manually. AI-generated learner profiles fill this gap, giving both teacher and student a clear picture. According to Swiecki et al., AI technologies can assist in gathering and analyzing long-term data to create learner profiles that reflect students' progress over time [8]. A student might log into their profile and see statements like, “Writing clarity: 70% achieved; focus on sentence structure next”. This turn transforms learning goals into a clear, ongoing process.

In class, teachers can help students set clear goals, such as “Give a 3-minute English presentation by month’s end.” Tools like *Grammarly Goals* or other progress trackers let students monitor their improvement. For instance, Grammarly’s reports can show fewer grammar errors over time. A Kazakhstani student preparing for IELTS might use Cambridge “Write & Improve” platform, submitting weekly essays to receive instant scores and feedback. Tracking progress this way helps identify weak areas like vocabulary and turn broad goals like “improve writing” into concrete, measurable steps supported by data. This approach was supported by a recent case study in Kazakhstan which found that the *Write & Improve tool was as effective as teacher feedback* in improving students’ writing skills, suggesting that technology-based feedback can be integrated alongside traditional methods.

In summary, AI can enhance goal setting by personalizing targets, tracking progress, and giving students instant visual feedback. For Kazakhstani teachers, it can make self-regulated learning more engaging and manageable. As Moss and Brookhart highlight, students achieve more when they understand goals and see their progress [7]. While teachers recognize this value, they need practical ways to apply it. Thoughtfully used, AI offers the efficiency and personalization needed to turn learning goals into active, meaningful classroom practice.

Feedback

Feedback is often considered the heart of formative assessment, helping students see how their work aligns with learning goals and how to improve. In this study, teachers recognized its importance but admitted time pressure often limits feedback to brief notes or grades like “Good” or “Needs improvement” without further detail. Many teachers observed that students focus on grades and overlook feedback, confirming that timely, detailed responses are essential for meaningful learning improvement.

About half of the younger teachers and fewer older ones reported giving detailed feedback (see Table 1). Some used strategies like “two stars and a wish” or replaced grades with written comments to encourage revision. Others used coded feedback (e.g., [sp] for spelling) to promote self-correction. While these methods align with effective feedback principles as specific, timely, and actionable, teachers cited major challenges: large classes, delayed responses, and low student engagement. Many felt students often ignore comments. One teacher sighed that even if she wrote comments, some students did not even read them or they looked and tossed the paper. This kind of issue is common, whereas feedback needs not only to be given, but also understood and acted upon by students. Our findings suggest that teachers know *what* good feedback looks like but struggle with the *logistics and student follow-through* in practice.

Therefore, AI can greatly expand teachers’ ability to give timely, detailed feedback. Tools like *Grammarly*, *Turnitin Feedback Studio*, and *Write & Improve* instantly check grammar, vocabulary, and clarity as writing assistants. Students receive feedback immediately, which helps them self-correct before submission. 89% of language learners in one study acknowledged, using self-assessment with guidance made them more aware of their learning and less stressed. Meanwhile teachers can focus on deeper issues like content and structure. As local scholars point out, AI reduces teachers’ workload by automating routine tasks such as checking assignments, allowing them to dedicate more time to creative teaching and personalized support for each student [9].

For teachers, artificial intelligence can facilitate the process of providing feedback through features such as *QuickMarks and comment banks* in Turnitin’s Feedback Studio. Turnitin not only checks for plagiarism, but also allows teachers to add pre-written comments to students’ papers. Teachers who participated in our study and used Turnitin noted that it saved time when evaluating essays and made their feedback more consistent. In addition, new AI features allow to create drafts of reviews for teacher review. For example, some learning management tools now offer feedback offered by AI suggests a comment that the teacher can edit or approve after analyzing a student’s response. This kind of AI-generated feedback, structured by content, evidence and improvement tips has been tested in tools such as the *Curipod’s* AI Feedback module.

In one example, students wrote short answers based on what they had read. It usually takes a week to get grades and feedback but with an AI tool like *Curipod* teachers receive instant grades on content, evidence, organization, language and tips for improvement. One of the interviewed teachers noted that AI provided feedback to each student within a few minutes, which could not be done manually. Students quickly corrected and resubmitted their papers in the same class. This rapid feedback and improvements demonstrate how artificial intelligence can make formative assessment in real time achievable even in large classrooms.

AI also improves oral language skills. Speech applications such as *ELSA Speak* or *Google-based* tools analyze pronunciation and fluency of speech instantly correcting them. This is especially useful in Kazakhstan where it is limited to native speakers. One teacher reported that encouraging her students to use the free app “Elsa Speak” for homework over a month. And those students who used it showed a marked improvement in pronunciation. AI can also personalize feedback, correct hints or reports based on each learner’s needs. Mostly teachers in language teaching strive for This kind of feedback but not always every student succeeds. This differentiated feedback helps teachers to channel their support more effectively.

AI feedback is not a replacement for teachers but a way to extend their impact. Our findings propose that students still value personal, human feedback. As AI copes with repetitive tasks like correcting basic errors. This lets teachers focus on meaningful dialogue and mentorship. However, artificial intelligence can misinterpret the context, so teacher guidance is vital.

In conclusion, AI can significantly improve feedback in formative assessment through timely, detailed, and personalized responses, reducing workload and improving the learning process. As recognized by the teachers, the integration of feedback tools with AI has great prospects for improving writing, speaking and general student engagement in the feedback process. With proper training, Kazakhstani teachers can use these tools to provide effective support to every student even in large number of classrooms.

Self-Assessment

Self-assessment (SA) allows students to evaluate their own learning, fostering reflection and independence. Although it enhances critical thinking, the study found that such practices are not common in surveyed English classes. As Table 1 shows, about half of younger teachers and fewer older ones use SA regularly. Common techniques include learning journals, “*can-do*” checklists, and color-coded tasks to track understanding. Providing clear rubrics and model examples further helps students assess their work, recognize progress, and take responsibility for improvement.

Research shows that self-assessment strengthens learning and self-awareness. For instance, Mazloomi and Khabiri initiate when students practiced self-assessment in writing, their performance significantly improved and their assessments became more aligned with their teacher’s, indicating greater self-awareness [10]. In this study, students said self-assessment felt empowering and less stressful than teacher grading. However, learners often need guidance to do it well without training, their reflections stay surface-level, such as simply noting “I’m good” or “I’m bad,” rather than identifying specific areas for improvement.

AI can strengthen self-assessment by giving students instant feedback and helping them reflect more accurately. A straightforward example is the use of *self-grading quizzes* in online form tools. Simple digital quizzes like Google Forms or Kahoot let learners check what they know, but AI tools like *Quillion* or another AI go further by explaining correct answers and suggesting what to review.

Advanced systems can even compare a student’s self-rating with an AI evaluation of the same work. This approach was hinted at in research by Lee J., noting AI can help generate individualized feedback by identifying patterns and discrepancies [11].

As shown in the Hopfenbeck et al. perspective, AI can support students in using rubrics. For example, *evaluating student-created work using a rubric to allow learners to verify the accuracy of their own self-assessment* [12]. In simpler terms, a student can ask an AI, “*Here is my work and here is the rubric - what level do I meet for each criterion?*” and compare that to their own judgment.

AI tools in evaluation are emerging to help students think about their learning. For instance, a chatbot can ask questions like *“What was hardest today?”* or *“On a scale of 1-5, how confident are you about using the past perfect tense correctly?”* Then AI tool can analyze answers and detect mismatches. If a student feels confident but makes errors, it can suggest reviewing certain points. This guided reflection helps learners judge their progress better and develop self-awareness, turning assessment into an active, self-regulated learning process.

Another point where AI can help is by providing *examples of work at different quality levels*, as training for self-assessment. Educational researchers recommend using anonymous student texts as teaching materials to help students understand the strengths and weaknesses of writing. Such examples serve as models that develop skills for clearer judgment and self-assessment [13]. AI also offers private, personalized feedback. Students can track their progress through measurable improvements, building confidence and a growth mindset. This makes AI a useful partner in developing self-awareness and independent learning skills.

For students who are shy or unsure about self-assessment, AI tools can provide a form of *private coaching*. For instance, an AI speaking app can analyze pronunciation, vocabulary, and fluency, giving instant feedback and scores. Students can then practice again, track their progress, and see measurable improvements. This process promotes self-awareness and a growth mindset, as learners witness their own progress through real-time feedback and constant practice. This reduces pronunciation errors from 10 to 3 after practice.

Teachers who introduced self-assessment with AI tools observed greater student engagement and awareness of learning goals. Many felt AI could make this process more attractive, especially via gamified apps and progress trackers. One teacher mentioned that using a *“cool app that feels like a game”* could get students to reflect without feeling like it’s as a chore.

In general, although self-assessment is still developing in Kazakhstani English classes, AI can help to provide quick feedback. As Mazloomi and Khabiri’s study reported, self-assessment made students feel more responsible and less stressed [10].

Peer-Assessment

Peer assessment (PA) lets students evaluate each other’s work. This provides authors with additional feedback, while encouraging reviewers to critically evaluate their own knowledge. This was the least practiced formative method in the study. Only about half of younger teachers and one-fifth of older ones used it regularly. Most applied it for quick answer checks rather than full reviews, and cultural norms often made students reluctant to critique peers or trust their feedback. Teachers noted that some learners give overly generous marks, while stronger students feel frustrated with weaker peers. For example, a respondent mentioned, *“My students don’t want to criticize their friends, so they either give all high marks or avoid saying anything useful.”* Another said, *“Strong students complain when they are paired with weaker ones - they think it’s a waste of time.”*

Teachers who implemented peer assessment observed positive outcomes. One instructor asked students to exchange essays and suggest two improvements each. Though they were doubtful at first, learners began give constructive feedback when clear rules and rubrics were introduced. Some students reported that seeing a classmate’s approach to the same task gave them new ideas (this resonates with a student quote from Lee’s case study: reading others’ writing helps improve one’s own) [14]. Also, correcting a peer’s work can highlight one’s own mistakes, as one student in Casey et al. noted: when correcting others, *“they could see where they were going wrong”* [15]. Early comments were often generic (*“good job”*), but improved with guidance. Success depended on clear criteria, teacher support, a trusting classroom atmosphere and sometimes strategic pairing.

Hence, introducing AI into peer-assessment can address some of the logistical and qualitative challenges. Digital online platforms for peer review like *Peergrade* or *Google Classroom* allow anonymous reviews with built-in rubrics, which reduce bias and social pressure while ensuring participation. Teachers in our study who had tried digital peer review (one used

Google Classroom's peer review feature) said it made the process smoother and more accountable. They could see who gave feedback and what was said and ensure everyone participated.

AI can further enhance this process by detecting vague feedback, prompting students to elaborate, or offering phrasing suggestions for constructive comments. Research by Er et al. suggests that language models can be used to support peer feedback by providing prompts or even initial feedback that students can build on [16]. Such support helps students provide clearer, more useful reviews and teaches them how to evaluate writing critically, making peer assessment both fairer and more educational. If a student reviewing a peer's essay struggle to express a critique, an AI could whisper a prompt like, "*Does the introduction clearly state the thesis? Maybe suggest adding a thesis statement if it's missing.*" This not only helps the reviewer give better feedback but also teaches them what to look for.

Another exciting application is using AI to *facilitate peer feedback in large classes*. It is challenging for teachers to monitor all peer interactions in large classes. Therefore, AI can assist by analyzing comments and identifying common errors for the teacher to address. Performing the functions of a digital moderator AI tools help to ensure the organization and accuracy of assessment, supporting the large-scale management.

Peer review simplifies the evaluation process by appointing reviewers, collecting feedback, and using rubrics with prompts like "What is one of the strengths?" or "What can be improved?" One teacher noted that over time, students' comments became clearer and more consistent with the headings, which improved the quality of the reviews.

AI can improve this by providing anonymity, correcting grade bias, and mitigating extreme grades, making peer review more balanced and fair. With AI controlling and monitoring, teachers can focus on the quality of feedback, whereas students gain deeper insight and motivation, especially in larger classrooms.

To summarize, AI and digital platforms can make peer review more structured, fair, and educational for students. By automating tasks such as grouping students and collecting feedback, AI allows teachers to focus on learning and support. It also makes peer assessment manageable in large classrooms, providing students with more feedback than a single teacher could provide. The teachers who participated in our study were optimistic, noting that clearer guidance and anonymous systems could improve the effectiveness of peer evaluation.

Strategic Teacher Questioning

Strategic teacher questioning helps teachers evaluate and deepen knowledge by using focused questions that go beyond simple memorization. According to the survey results, about 50–75% of teachers indicated they use open-ended questions. However, classroom observations and self-reflection show that when questions are planned in advance to identify key points of understanding or common misconceptions, the ability to employ truly strategic questioning remains an area for growth. One teacher noted that she improvised her questions in class. Sometimes she hit a great question that sparks a big discussion, other times she realizes she only asked yes/no or very basic questions". Observations have shown that although about half use open-ended questions, few of them plan them strategically to identify logic or misconceptions. Teachers also try to attract quieter students and save waiting time for deeper reflection. It is important to create a safe environment for reflection, especially in multilingual classrooms where students may fear mistakes.

AI can also significantly enhance this process. Tools like *Quillion* or *Curipod* can generate a range of questions from a text, saving teachers' time and ensuring varied question types. In class, platforms like *Curipod* allow all students to answer simultaneously, giving teachers real-time insights into understanding and misconceptions. For instance, after an open-ended question, AI can instantly summarize common themes or errors. AI can also personalize questioning, posing follow-ups that challenge students' reasoning, or even train students to create better questions by prompting them to add "why" or "how" for deeper inquiry.

Another angle is *personalized questioning*. AI tutors adapt questions on the fly based on student responses. In a classroom context, while a teacher is working with one group, another

group could be using an AI-driven app that asks them Socratic questions about a text they're reading, tailored to their level. For example, if a student's answer to "Why did the character do X?" is shallow, the AI might follow up with, "Can you think of an alternative action the character could have taken? What might happen then?" This keeps students engaged in high-order thinking even without direct teacher intervention, essentially scaling strategic questioning to multiple students at once.

An example from practice shows how AI-supported questioning transforms learning. Students submit answers digitally, AI groups responses, and the teacher quickly identifies patterns and misunderstandings to guide discussion. This real-time synthesis gives insight into every student's thinking, something impossible with traditional hand-raising.

By generating and managing complex questioning techniques, AI helps teachers involve all students and collect immediate formative data from their responses. Our participating teachers were intrigued by the idea that an AI could summarize 30 answers to an open question in real time. This collective insight allows teachers in Kazakhstan's often large classes to truly practice "responsive teaching" which adapts their questions and instruction based on the full picture of student understanding. With AI's assistance, teachers can ensure that questioning remains a powerful diagnostic and learning tool, and not just a routine exercise. Effective questioning, paired with intelligent analysis directs attention to content and encourages students to articulate their thinking, fulfilling its role as a central pillar of formative assessment.

Conclusion

Formative assessment is increasingly recognized as essential for quality education, particularly in language teaching where continuous feedback and skill development are crucial. This study explored current formative assessment practices in Kazakhstani English classrooms and highlighted how AI tools can support their improvement. Results show that teachers recognize its value and apply its elements to different extents but encounter issues like large class sizes, lack of time, and limited training. Although aspects such as timely feedback, clear learning objectives, adaptive instruction, and self- or peer-assessment are practiced, they are not yet fully effective in most cases.

Through instant feedback, data-driven insights, and personalized learning, AI helps teachers reduce routine tasks and focus on meaningful interaction. AI can handle repetitive tasks like grading or grammar checks and reveal learning patterns through analytics. Rather than replacing teachers, it strengthens their impact by saving time and offering deeper insights to guide instruction.

Implications and Practical Significance

Combining traditional formative assessment with AI support provides a practical solution for Kazakhstan's education context. It ensures faster, more personalized feedback, enables better management of large groups, and promotes student engagement. This model advances a more student-centered and sustainable approach to teaching and assessment.

Limitations

Although comprehensive, the study has certain limitations. The sample was limited to Almaty and nearby areas, which may not represent the whole country, especially rural or non-Russian-speaking regions. Some data were self-reported and may include bias. Without experimental testing of AI's direct impact on learning, the suggested approaches still need further validation in Kazakhstan's context.

Recommendations

Based on the findings, it is recommended the following steps for educators, administrators, and stakeholders in Kazakhstan's education system:

- *Professional Development:* Invest in teacher training programs for both formative assessment techniques and the use of AI educational tools. Teachers need hands-on experience with tools like Curipod, Grammarly, or Peergrade and others apply them confidently. Specialized seminars could be organized to show, for instance, how to conduct a lesson with AI-assisted feedback or how to manage peer-assessment online.

- *Pilot Programs*: Schools should consider the possibility of pilot projects in which several classes will conduct a formative assessment using artificial intelligence during the semester with the support of IT staff or teachers competent in the field of information technology. These pilot projects can collect data on what works and what doesn't in our local environment.

- *Infrastructure and Access*: For successful AI integration, schools must provide access to the necessary technologies. This includes reliable internet, student devices, and appropriate software subscriptions or licenses. Considering budget constraints, the Ministry of Education and school networks could agree to issue educational licenses for AI tools or prioritize funding for digital infrastructure in language classrooms.

- *Curriculum and Assessment Policy*: Integrating formative assessment supported by AI into official curriculum and evaluation standards could strengthen teaching quality. The inclusion of tools such as portfolios or progress reports in the student assessment system will facilitate the wider use of these methods. In addition, clear policies regarding the ethical and responsible use of artificial intelligence, including data protection and fair academic practice, are also important.

Student Training and Mindset: It is necessary to teach students to perceive formative assessment and artificial intelligence tools as auxiliary learning tools, and not as a shortcut. Platforms like Grammarly support skill development, while self- and peer-assessment foster reflection and improvement. Instant and unbiased feedback from AI can strengthen thinking by encouraging constant practice and revision.

In conclusion, this study highlights that effective formative assessment is a multifaceted job that requires pedagogical skill and significant teacher time. By using AI as an ally in this process, Kazakhstan's schools can solve some of the remaining problems and move into a new era of educational practice. The novelty of the research approach lies in demonstrating that AI, if aligned with sound pedagogical principles, can be a powerful tool for improving teaching and learning. This is particularly significant for Kazakhstani educational system, which is actively seeking to innovate and improve outcomes to meet international standards.

As with any innovation, success depends on thoughtful implementation. Teachers' experience, sensitivity and creativity remain indispensable and AI serves as a support, not a substitute. If applied wisely, it can enhance the educational value of each lesson. Classes where teachers use AI-based ideas provide timely feedback, guide reflection, and foster collaboration. This vision reflects the true potential of artificial intelligence to advance formative assessment in Kazakhstan and beyond.

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Author Contributions:

Yersultanova G. – conceptualized and supervised the study, developed the research methodology, coordinated the data collection process and contributed to manuscript writing and scientific editing.

Orazakynkyzy F. – carried out the survey data collection, performed statistical and thematic analysis, contributed to the presentation of results and manuscript preparation.

Zhylytyrova Zh. – conducted the literature review, participated in data analysis and interpretation, contributed to drafting and revising the manuscript, responsible for the correspondence.

He Ling – contributed to the discussion of AI integration in formative assessment, assisted with the interpretation of findings in the international context and participated in reviewing and editing the manuscript.

REFERENCES:

1 Zhumazhanova S.K., Musabaeva M.O., Akhmetzhanova A.A., Zhagparova S.Zh., Torebekova A.K., Baygaraeva A.M. (2024). Altynsarin National Academy of Education. pp. 4–8. URL: <https://uba.edu.kz/storage/app/media/987.pdf> (accessed: 11.12.2025).

2 Nuraly O.N., Bertleu Zh.B., Dyussebayeva S.B. (2024). Monitoring and evaluation of students knowledge in the English language lesson. Bulletin of Zhetysu University named after I. Zhansugurov. vol. 113, no. 4, pp. 31–39. URL: <https://www.doi.org/10.53355/ZHU.2024.112.4.004> (accessed: 18.03.2026).

3 President Kassym-Jomart Tokayev's State of the Nation Address to the People of Kazakhstan "Kazakhstan in the Era of Artificial Intelligence: Current Challenges and Solutions through Digital Transformation" (2025). URL: <https://www.akorda.kz/en/president-kassym-jomart-tokayevs-state-of-the-nation-address-to-the-people-of-kazakhstan-kazakhstan-in-the-era-of-artificial-intelligence-current-challenges-and-solutions-through-digital-transformation-1083029> (accessed: 25.01.2026).

4 Hattie J. (2009). Visible learning: A synthesis of over 800 meta-analyses relating to achievement. London, UK: Routledge, pp. 108–129.

5 Shute V.J. (2008). Focus on formative feedback. Review of Educational Research, vol. 78, no. 1, pp. 153–189.

6 Popham W.J. (2011). Transformative assessment in action: An inside look at applying the process. VA: ASCD, p. 135.

7 Moss C.M., Brookhart S.M. (2010). Advancing formative assessment in every classroom: A guide for instructional leaders. Alexandria, VA: ASCD, pp. 79–134.

8 Swiecki Z., Khosravi H., Chen G., Martinez-Maldonado R., Lodge J.M., Milligan S., Selwyn N., Gašević D. (2022). Assessment in the age of artificial intelligence. Computers and Education: Artificial Intelligence, 3, 100075. DOI: <https://doi.org/10.1016/j.caeai.2022.100075>

9 Yeginbayeva Zh.Sh., Pigovayeva N.Yu., Čech T., Koshkimbayeva R.Kh., Orazalieva R.B. (2025). The use of artificial intelligence in English language teaching. Bulletin of Toraighyrov University. Pedagogics Series, 3, pp. 74–83. DOI: <https://doi.org/10.48081/YAJ2346>

10 Mazloomi S., Khabiri M. (2018). The impact of self-assessment on language learners' writing skill. Journal of Language Teaching and Research, vol. 9, no. 1, pp. 46–56.

11 Lee I. (2011). Formative assessment in EFL writing: An exploratory case study. Changing English, vol. 18, no. 1, pp. 99–111.

12 Hopfenbeck T.N., Zhang M., Cui Y. (2023). Challenges and opportunities for classroom-based formative assessment and AI: A perspective article. Frontiers in Education, 8, 1270700. DOI: <https://doi.org/10.3389/educ.2023.1270700>

13 Chappuis J., Stiggins R. (2018). Classroom assessment for student learning: Doing it right – using it well (3rd ed.). New York, NY: Pearson. URL: <https://www.cliffsnotes.com/study-notes/16876963> (accessed: 12.01.2026).

14 Lee J. (2021). AI in support of adaptive feedback in education. International Journal of Artificial Intelligence in Education, vol. 31, no. 4, pp. 930–955.

15 Casey D., Gibson J., Scheaffer A., Elliott C. (2011). Utilizing peer assessment in the classroom. International Journal of Teaching and Learning in Higher Education, vol. 23, no. 2, pp. 229–236.

16 Er E., Dimitriadis Y., Gašević D. (2020). A collaborative learning approach to dialogic peer feedback: A theoretical framework. Assessment & Evaluation in Higher Education, vol. 46, no. 2, pp. 586–600. DOI: <https://doi.org/10.1080/02602938.2020.1786497>

ҚАЗАҚСТАН МЕКТЕПТЕРІНДЕГІ АҒЫЛШЫН ТІЛІ САБАҚТАРЫНДА ЖАСАНДЫ ИНТЕЛЛЕКТІНІ ҚАЛЫПТАСТЫРУШЫ БАҒАЛАУҒА ИНТЕГРАЦИЯЛАУ

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Аңдатпа. Мақалада Қазақстан мектептеріндегі ағылшын тілін оқытудағы қалыптастырушы бағалаудың (ҚБ) қазіргі жағдайы қарастырылады және жасанды интеллекттің (ЖИ) бұл үрдістегі тиімділігі және жақсарту жолдары зерттеледі. Қалыптастырушы бағалау оқу сапасын арттыруда маңызды рөл атқарады, алайда оның Қазақстан мектептерінде жүзеге асырылуы бірқатар қиындықтарға тап болып отыр. Зерттеуде түрлі жас топтарындағы мұғалімдердің ҚБ қолдануы, ҚБ қағидаттарына қанағаттануы сай келетіні және олар кездесетін қиындықтар салыстырмалы түрде зерттелген. Негізгі

назар ChatGPT, Grammarly, Quillion, Turnitin Feedback Studio, Peergrade, Curipod және т.б. сияқты жасанды интеллект құралдарын қалыптастырушы бағалауды жетілдіру мақсатында кіріктіруге аударылған. Қалыптастырушы бағалаудың әрбір компонентінде (оқытуды жедел түзету, оқу мақсаттарын қою, кері байланыс беру, өзін-өзі бағалау, өзара бағалау және стратегиялық сұрақ қою) жасанды интеллекттің рөлі нақты мысалдармен сипатталады. Зерттеу нәтижелері жасанды интеллектті қолдану мұғалімнің жүктемесін азайтып, оқушыларға жедел әрі дараланған кері байланыс беруге мүмкіндік жасап, олардың оқу белсенділігін арттыра алатынын көрсетеді. Жұмыстың жаңашылдығы дәстүрлі қалыптастырушы бағалау әдістерін жасанды интеллект технологияларымен ұштастыруында, бұл Қазақстан мектептері үшін практикалық маңызға ие. Зерттеуде сондай-ақ жасанды интеллектті сынып тәжірибесіне енгізумен байланысты қиындықтар мен этикалық мәселелер де көрсетілген. Жалпы алғанда, зерттеу мұғалімдердің цифрлық дағдыларын дамыту және Қазақстанның білім беру контекстінде жасанды интеллект көмегімен тиімді қалыптастырушы бағалау үшін жағдайлар жасау бойынша ұсыныстар баяндалады.

Кілт сөздер: қалыптастырушы бағалау, ағылшын тілін оқыту, жасанды интеллект, кері байланыс, өзін-өзі бағалау, өзара бағалау, Қазақстан.

ИНТЕГРАЦИЯ ИИ В ФОРМАТИВНОЕ ОЦЕНИВАНИЕ НА УРОКАХ АНГЛИЙСКОГО ЯЗЫКА В ШКОЛАХ КАЗАХСТАНА

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Аннотация. В данной статье рассматривается текущее состояние формативного оценивания (ФО) в преподавании английского языка в школах Казахстана и рассматривается, как искусственный интеллект (ИИ) может поддерживать и совершенствовать этот процесс. Формативное оценивание играет ключевую роль в повышении качества обучения, однако его реализация в школах Казахстана сталкивается с рядом проблем. В исследовании представлены результаты исследования, сравнивающего применение ФО учителями различных возрастных групп, степень следования принципам ФО и трудности, с которыми они сталкиваются. Особое внимание уделено новому подходу - интеграции инструментов искусственного интеллекта, таких как ChatGPT, Grammarly, Quillion, Turnitin Feedback Studio, Peergrade, Curipod и др., для совершенствования формативного оценивания. В каждом компоненте ФО (немедленная корректировка обучения, постановка учебных целей, предоставление обратной связи, самооценка, взаимооценивание и стратегическое задавание вопросов) описывается роль ИИ на практике. Результаты демонстрируют, что использование ИИ может сократить нагрузку на учителя, обеспечить учащимся оперативную и персонализированную обратную связь и повысить их активность в обучении. Новизна работы заключается в сочетании традиционных методов формативного оценивания с технологиями искусственного интеллекта, что имеет практическую значимость для школ Казахстана. В исследовании также рассматриваются проблемы и этические аспекты, связанные с интеграцией ИИ в практику преподавания. В целом, исследование предлагает рекомендации по развитию цифровых навыков учителей и созданию благоприятных условий для эффективного формативного оценивания с использованием ИИ в образовательном контексте Казахстана.

Ключевые слова: формативное оценивание, преподавание английского языка, искусственный интеллект, обратная связь, самооценивание, взаимооценивание, Казахстан.

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